

CLAIMS

What is claimed is:

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1. A method for a network device to negotiate a common mode of	F
communication between two nodes, comprising:	
communication between two needs, comprising.	

- a) establishing a first communication path between the network device and a first node;
- b) establishing a second communication path between the network device and a second
- 5 node;

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- 6 c) establishing a third communication path through the network device, the third
- 7 communication path coupling the first and second communication paths to provide a
- 8 common mode of operation between the first node and the second node.
 - 2. The method of claim 1, wherein the network device is a probe and establishing
- 2 the third communication path through the network device establishes a point to point link
- 3 between the first and the second nodes...
 - 3. The method of claim 1, wherein establishing the first communication path
- 2 between the network device and the first node comprises negotiating a mode of operation
- 3 with the first node.
 - 4. The method of claim 3, wherein negotiating a mode of operation with the first node comprises negotiating a speed of a transmission of data over the first communication path between the network device and the first node.
- 5. The method of claim 3, wherein negotiating a mode of operation with the first
- 2 node comprises negotiating one of half duplex and full duplex communication over the
- 3 first communication path between the network device and the first node.



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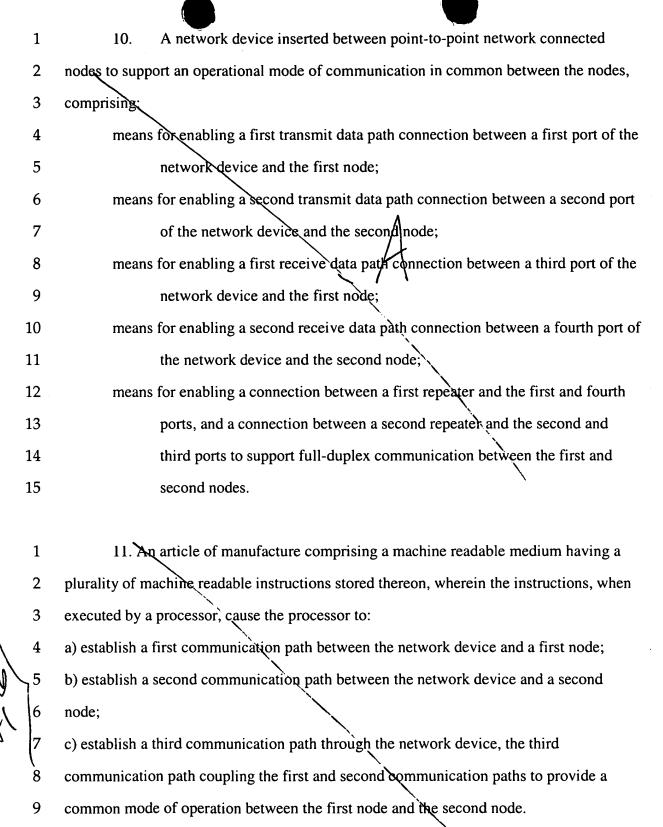
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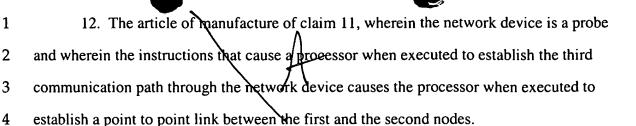
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6. The method of claim 3 wherein establishing a second communication path
between the network device and the second node comprises negotiating a mode of
operation with the second node.

- 7. The method of claim 6, wherein establishing a third communication path through the network device, the third communication path coupling the first and second communication paths to provide a common mode of operation between the first node and the second node, comprises: comparing the mode of operation with the first node and the mode of operation with the second node; selecting one of multiple communication paths through the network device as the third communication path that provides a common mode of operation between the first node and the second node.
 - 8. The method of claim 7, wherein the common mode of operation between the first node and the second node is the best mode of operation available between the first node and the second node.
- 9. A network device that negotiates a common mode of communication between two nodes, comprising:
- 3 means for establishing a first communication path between the network device and a first
- 4 node;
- 5 means for establishing a second communication path between the network device and a
- 6 second node;
- 7 means for establishing a third communication path through the network device, the third
- 8 communication path coupling the first and second communication paths to provide a
- 9 common mode of operation between the first node and the second node





- 3. The article or manufacture of claim 11, wherein the instructions that cause a processor when executed to establish the first communication path between the network device and the first node cause the processor when executed to negotiate a mode of operation with the first node.
- 14. The article of manufacture of claim 13, wherein the instructions that cause a processor when executed to negotiate a mode of operation with the first node cause the processor when executed to negotiate a speed of a transmission of data over the first communication path between the network device and the first node.
- 15. The article of manufacture of claim 13, wherein the instructions that cause the processor when executed to negotiate a mode of operation with the first node cause the processor when executed to negotiate one of half duplex and full duplex communication over the first communication path between the network device and the first node.
- 16. The article of manufacture of claim 13 wherein the instructions that cause a processor when executed to establish a second communication path between the network device and the second node cause the processor when executed to negotiate a mode of operation with the second node.
- 17. The article of manufacture of claim 16, wherein the instructions that cause a processor when executed to establish a third communication path through the network



- 3 device, the third communication path coupling the first and second communication paths
- 4 to provide a common mode of operation between the first node and the second node,
- 5 cause the processor when executed to:
- 6 compare the mode of operation with the first node and the mode of operation with the
- 7 second node;
- 8 select one of multiple communication paths through the network device as the third
- 9 communication path that provides a sommon mode of operation between the first node
- and the second node.
- 1 18. The article of manufacture of claim 1\(\frac{1}{3}\) wherein the common mode of
- 2 operation between the first node and the second node is the best mode of operation
- 3 available between the first node and the second node.